fourth of the length; hinge margin slightly curved, anterior end narrowly rounded, posterior end much wider. Interior white, faintly pink tinted in the cavity, hardly iridescent. Right valve with one strong wedge-shaped cardinal tooth standing nearly at a right angle to the larger axis of shell, slight rudiments of accessory teeth in front of and behind it on the hinge-line; the lateral single, stout and high, separated by nearly its own length from the cardinal. Left valve with two stout, subequal, oblique, crenulated cardinal teeth and two strong laterals. Anterior adductor and pedal scars deep, posterior scars very shallow, the adductor and foot retractor completely united. Dorsal scars well within the cavity of the beaks, the major row (of about 6–8 small deep scars) extending obliquely across the cavity from below the cardinal to the lower side of the hinge-plate; some smaller, shallower scars below the main series. Pallial line deep anteriorly and below, shallow posteriorly. Length 111, height 71, diam. 43 mm.

Laguna de Atasta, near San Juan Bautista, Tabasco, Mexico.

Type is a ♀ specimen. It is allied to *U. umbrosus* Lea, differing in the narrower anterior end and consequently triangularly oblong form, the hinge-line and basal margin converging strongly forward; the lateral teeth are also shorter. The female is much more swollen posteriorly than in *U. umbrosus*.

It is named in honor of Prof. José N. Rovirosa, known for his botanical explorations in southern Mexico.

This species falls into the genus *Lampsilis* as understood by Simpson. Pending the publication of his classification of the group, it is here placed under *Unio*.

SOME NOTES ON THE LAND SHELLS OF WESTERN FLORIDA.

BY C. W. JOHNSON.

The following notes on the land mollusca are based on a few obtained incidentally while collecting fossils in Western Florida during the latter half of February and the first week in March.

These notes give a more southern and western distribution for a number of species than has heretofore been recorded.

The more southern distribution is undoubtedly due to the direct southerly course of all the rivers, which during freshets carry down great quantities of drift-wood to which a number of the land shells

usually cling for preservation. A more western range for a number of the eastern species would be expected, and more thorough and extended researches would probably show a much greater distribution westward.

In the woods just east of Tallahassee, among the leaves around the foot of some large magnolias and oaks, a number of *Polygyra pustula* and *P. hopetonensis* and a few *Omphalina lævigata* and *Strobilops labyrinthica* were found. Near by in an old decayed log were found *Glandina truncata* (young), *Vitrea indentata*, *Zonitoides arboreus*, *Z. milium* and *Philomycus carolinensis*.

At Jackson's Bluff on the Ocklocknee river, 24 miles west of Tallahassee, is a fine exposure of the Chesapeake miocene. Here a few favorable logs and stones were hastily turned over; under the limestone was found *Helicina orbiculata* and *Glandina truncata*, while from the logs were taken *Omphalina lævigata*, *Gastrodonta suppressa*, a form in which the umbilicus is but slightly perforate, *G. demissa*, *Vitrea indentata*, *Helicodiscus lineatus* and *Polygyra inflecta*; for the latter species this is a more southern locality than has previously been given.

Two miles below Jackson's Bluff is Larkin's Bluff; under some boards and wood near the Bluff only *Polygyra hopetonensis* was found; this is the most western locality from which I obtained this species.

About half a mile below Bailey's Ferry, on the west side of the Chipola river, 11 miles west of Blountstown, is the farm of Mr. J. P. McClellan; here the Chipola bed comes to the surface and the shells are ploughed out in the field. After obtaining a fine lot of the Chipola fossils and several boxes of the marl from which the clay and sand had been washed through a seive, I turned over an old log, just as I was leaving, and found *Gastrodonta intertexta*, the strongly carinated form, but with the usual internal callus. *G. demissa*, the most southern locality from which this species has been recorded. *Polygyra appressa* var. *perigrapta*, formerly recorded only from the mountainous portions of Tennessee and adjacent States, *P. inflecta*, and *P. pustula*, which has not before been reported west of Cedar Keys. In crossing the field near by I found an immature specimen of *P. albolabris*.

While waiting for the steamboat at Blountstown a short stroll was taken through the woods; a search beneath the oak logs disclosed a number of *Polygyra fallax*. It seemed strange how these were confined exclusively to the oak; numerous pine logs were turned over, close by the oak, and all conditions seemed equally favorable, but not a single shell was obtained. *P. fallax* has not to my knowledge been recorded south of northern Georgia. Under the bark of logs, in the drift along the Apalachicola river, was the ever present *Zonitoides arboreus*.

As the steamboat did not connect with the east-bound train, I was obliged to go to Marianna for the night. I had noticed from the car

window the week before an outcrop of limestone at the railroad bridge across the Chipola river, one mile east of town, that I wanted very much to examine, so before train time, the next morning, I made a grand rush for the river. The nummulitic limestone contained but one mollusk, *Pecten perplanus*, but what it lacked paleontologically, it made up malacologically in furnishing a suitable environment for numerous species of snails. A glance showed it to be an ideal collecting ground; limestone, moisture, a varied vegetation, a cave and an old quarry with moss-covered rocks in all directions, is just what the snails want, and visions of a new species or variety formed an active stimulant; for I felt sure that Hemphill, Ferriss or Sargent had not been there. But alas, while the snails were thick, a *nov. sp.* was not to be found by "dis chile." Ferriss *would* no doubt have found one, for I still believe it's there. *Pyramidula alternata* was very abundant, a coarsely sculptured and beautifully marked form, among which I found a sinistral specimen. *P. perspectiva* was also plentiful; neither of these have previously been recorded from Florida. Among the leaves in front of the cave were numerous fine specimens of *Gastrodonta demissa*, the majority of which are slightly more depressed than the typical form. *Omphalina laevigata* chiefly frequented an old log, while *Helicina orbiculata* were found among the rocks in the drier portions of the quarry. A few specimens of the following species were also obtained: *Glandina truncata*, *Zonitoides arboreus*, *Vitrea indentata*, *Strobilops labyrinthica*, *Bifidaria armifera*, *Polygyra inflecta*, *P. appressa* var. *perigrapta*, and *P. stenotrema*. The latter species have not before been recorded from Florida. In the river drift near the bridge were numerous specimens of *Polygyra auriformis* and a few *Succinea luteola*. As this drift was not the direct wash of the river, but was formed by the water backing up over the low ground along the railroad, I am inclined to think that the two species could be found living among the grass and sedge along the high-water mark.

EPIPHRAGMOPHORA HARPERI, N. SP.

BY F. W. BRYANT.

Shell unbilicate, translucent, white; suture well defined; spire a depressed cone composed of five regularly increasing convex whorls, the first three smooth, the remainder marked by obscure, closely-crowded, oblique lines of growth; base convex; aperture nearly circular, oblique; peristome thin, broadly expanded, and reflexed at lower third of baso-columellar portion, its extremities joined by an elevated ridge, bordering which is a somewhat triangular callus bounded on the inner side by a ridge extending from the middle of the base of the reflected portion of the peristome obliquely to the